Volunteer Firemen

AUGUST

1941

NATIONAL FIRE PROTECTION ASSOCIATION
INTERNATIONAL
60 Batterymarch Street Boston, Massachusetts

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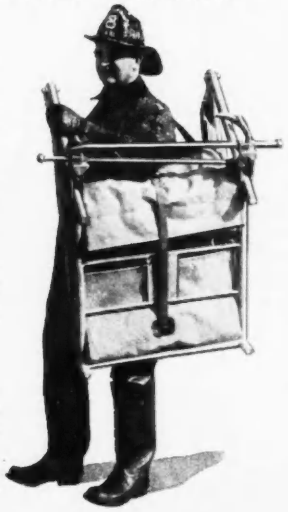
YES! THE B-E EVACUATOR IS ABSOLUTELY SAFE AND EFFICIENT IN NARROW ALLEYS!

Many chiefs have written us asking if the B-E EVACUATOR can be used in narrow alleys. The answer is emphatically YES! It can be held laterally, very close to the building without impairing its efficiency.

IF YOU CAN RAISE A LADDER—
YOU CAN USE AN EVACUATOR!

Easily carried up a ladder by any fireman, the EVACUATOR can be attached to any window and most roof parapets. Note the scene in the picture on the left: — A congested, narrow alley with wires criss-crossing and very little space. Yet, with the B-E EVACUATOR held by only two men, any number of persons can be rescued with ABSOLUTE SAFETY — just as SAFELY and QUICKLY as in streets where ample space is available.

REMEMBER—the first duty of a fire department is to save lives —the B-E EVACUATOR WILL AID YOU IN THAT DUTY!



Two models are offered—the B-E EVACUATOR for use with ground ladders shown in picture at left. The B-E EVACUATOR for use with aerial ladders.

The B-E EVACUATOR IS ABSOLUTELY SAFE in its construction. FIRE AND WATER PROOF, compact and durable, it is made of Chrome-Molybdenum steel tubing — gas welded — cadmium plated to prevent corrosion. The fabric is fire and water proof—ALL FOR ABSOLUTE SAFETY!

•

Write TODAY for profusely illustrated literature describing this NEW, QUICK, EFFICIENT METHOD of life protection. Better yet—ask us for a demonstration—no obligation, of course!

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DETROIT

MADE BY
MASTER CRAFTSMEN

E & E MANUFACTURING CO.
2970 WEST GRAND BOULEVARD
DETROIT, MICHIGAN

Volunteer Firemen

Volume 8 Number 8

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THE cover picture this month (*Whitney Studio, Lawrenceburg, Indiana*) shows a fire which recently destroyed the Lawrenceburg Roller Mills Company at Lawrenceburg, Indiana, causing a large loss. While the exact cause of the fire is not known it was discovered in a wooden trestle adjoining the plant shortly after an employee had burned rubbish nearby. When discovered the fire was so hot that the nearest private hose connection at the plant could not be used. Another private hose line reportedly burst when an attempt was made to use it. It is reported in the local press that the plant will not be rebuilt. Thus a town of 4400 persons will lose a major industry.

PRIORITY status for repair and maintenance materials required for the uninterrupted operation of fire protection services was included in a recent order by the Civilian Supply Allocation Division of the U. S. Office of Price Administration and Civilian Supply. While it is not yet clear just how far this order will go in supplying needed materials for new fire apparatus, it is gratifying because it should eliminate some of the delays in getting parts which have for some months plagued fire apparatus repair services. As pointed out in the July issue of VOLUNTEER FIREMEN, over half of the apparatus in service in municipal fire departments is over-age and largely of obsolete design. The ability to get parts to keep old equipment in repair until better equipment can be obtained is thus an important part of the fire defense job. The priority status now granted is an indication that the importance of fire protection to the civilian defense effort is becoming recognized in Washington. Mayor F. H. LaGuardia of New York City who is also U. S. Director of Civilian Defense, recently assured the N.F.P.A. Executive Office that vigorous action would be taken to see that necessary fire apparatus is provided both for ordinary purposes and for defense against possible air attacks.

SOME time after one o'clock on a recent evening, motorists passing through a New England community noticed that a barn located at the town infirmary was burning. The occupants of the institution were aroused and a telephone call was put through to the town police reporting the fire. There was no fire alarm box at the infirmary and apparently no one knew where the nearest street box was located. The police upon receipt of the fire call evidently decided not to take any chances on a false alarm and sent a cruising car a distance of several miles to investigate. Upon finding that there really was a fire, a call was sent to the fire department and the volunteer firemen responded. By the time the firemen had made the two mile run there was little question about there being a blaze and a lot of spectators were wondering why the fire department was so slow. Anyone who listens to police radio calls knows that this is not an isolated case. Police departments are not equipped to fight fires and they should be made to understand that the fire department cannot accept responsibility for any loss of life or property which occurs because fire calls are held up while the police are making a preliminary investigation.

MOST firemen and fire inspectors are familiar with the fact that fresh air ducts for ventilating systems are frequently located in alleyways or other locations in the rear of a building where the duct openings must be protected against possible entry of sparks or fire. Likewise it is not uncommon to find rubbish containers and even improvised incinerators located beneath or close by such air duct intakes. A recent theatre fire in North Chicago, Illinois, reported by the Illinois Inspection Bureau, furnishes a good illustration of what may happen in such situations. The theatre was in operation and the ventilating fan was in operation drawing fresh air through the duct at the rear of the building and discharging it into the auditorium. The air ducts while mostly metal lined were on wooden frames and had combustible inside linings (not permitted where air conditioning and ventilating systems conform to N.F.P.A. standards). In addition, the exposed under side of the duct at the rear of the building was not even metal covered, and the duct opening was not protected against sparks. Air duct openings into the auditorium were not equipped with shutters or dampers.

When the container of rubbish located directly below the duct intake caught fire, flames were quickly drawn into the ventilating system. Although the fire department quickly shut off the fan and controlled the fire, the entire frame work of the roof house and ducts was burned out. The fan motor and fan were seriously damaged. The auditorium was filled with smoke and the screen will have to be replaced. Numerous seats in the front of the auditorium were scorched by flying embers.

LAST month six departments with 84 men joined the Volunteer Firemen's Section for the first time. Twenty-one departments with 471 men renewed membership. This makes a total enrollment of 734 departments and 14,893 men. The following departments are newly enrolled:

Merced County Fire Department, Merced, California.

Talleyville Fire Company, Talleyville, Delaware.

Homestead Fire Department, Homestead, Florida.

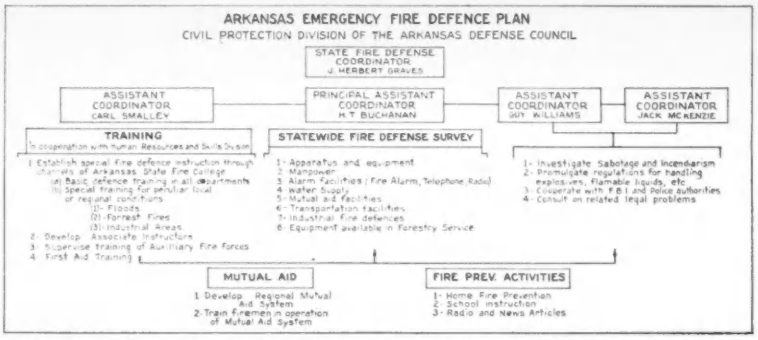
Lakewood Fire Department, Lakewood, New York.

Marion Hose Company No. 3, Marion, South Dakota.

Bowater's Newfoundland Pulp and Paper Mills, Ltd., Corner Brook, Newfoundland.

THE estimated U. S. fire loss for June, 1941, according to the National Board of Fire Underwriters is $24,943,000. This figure is based on notices of incurred loss received by company members of the Board, plus an allowance for unreported and uninsured losses. Losses for the first six months of 1941 are $6,116,480 less than the losses for the same six months last year. The following table shows the losses for the first six months of both 1940 and 1941.

	1940	1941
January	$36,260,650	$26,470,000
February	34,410,250	26,102,000
March	29,788,800	31,471,000
April	26,657,190	29,330,000
May	23,446,590	25,637,000
June	19,506,000	24,943,000
Total 6 months	$170,069,480	$163,953,000


ARKANSAS EMERGENCY FIRE DEFENCE PLAN
CIVIL PROTECTION DIVISION OF THE ARKANSAS DEFENSE COUNCIL
STATE FIRE DEFENSE COORDINATOR J. HERBERT GRAVES
ASSISTANT COORDINATOR CARL SMALLEY
PRINCIPAL ASSISTANT COORDINATOR H.T. BUCHANAN
ASSISTANT COORDINATOR GUY WILLIAMS
ASSISTANT COORDINATOR JACK MCKENZIE
TRAINING
In cooperation with Human Resources and Skills Division
1- Establish special Fire defence instruction through channels of Arkansas State Fire College
(a) Basic defence training in all departments
(b) Special training for peculiar local or regional conditions
(1)- Floods
(2)- Forrest Fires
(3)- Industrial Areas
2- Develop Associate Instructors
3- Supervise training of Auxiliary Fire forces
4- First Aid Training
STATEWIDE FIRE DEFENSE SURVEY
1- Apparatus and equipment
2- Manpower
3- Alarm facilities (Fire Alarm, Telephone Radio)
4- Water Supply
5- Mutual aid facilities
6- Transportation facilities
7- Industrial Fire defences
8- Equipment available in Forestry Service
1- Investigate Sabotage and Incendiarism
2- Promulgate regulations for handling explosives, Flamable liquids, etc
3- Cooperate with F.B.I and Police authorities
4- Consult on related legal problems
MUTUAL AID
1- Develop Regional Mutual Aid System
2- Train Firemen in operation of Mutual Aid System
FIRE PREV. ACTIVITIES
1- Home Fire Prevention
2- School instruction
3- Radio and News Articles

The above chart indicates the preliminary fire defense organization plans in use in the State of Arkansas. The organization is headed by State Insurance Commissioner J. Herbert Graves. A survey of fire fighting facilities is under way and a basic fire defense training course for firemen is being prepared. The state has been divided into sixteen districts with a district coordinator in each area.

FIRE DEFENSE NOTES

Connecticut. Following a meeting of Connecticut police and fire chiefs in July, Colonel S. H. Fisher, state defense administrator, announced the formation of a committee of ten fire chiefs to act as advisers on fire emergency plans and equipment. The committee will cooperate with Colonel Edward J. Hickey, state police commissioner and member of the state defense council. Chiefs appointed to the committee are: Michael T. Keena, Hartford; George Milne, Rockville; Michael Lawton, Middletown; Thomas Cavanaugh, Waterbury; Thomas Shipman, New London; James Swan, Seymour; Joseph Pachl, New Haven Annex; Paul Heinz, New Haven; Martin Hayden, Bridgeport; and Victor Veit, Stamford.

Standardization of disaster signals and possible mobilization points for police and fire units during an emergency were discussed at the July meeting.

Kentucky. The Kentucky Civil Defense Commission through G. H. Parker, Assistant Director in charge of fire defense, recently sent the following letter to all mayors and fire chiefs in the state outlining precautions that should be taken to bring fire defenses to the highest possible standards. Mr. Parker is manager of the Kentucky Actuarial Bureau. His suggestions to the fire departments of Kentucky should prove of interest to those responsible for fire defense activities in other localities:

To Mayors and Fire Chiefs:

Because of the seriousness of the international situation, we respectfully urge that a careful survey be made of the fire defenses of your town, and that plans be formulated to bring them up to the highest standard possible.

Special consideration should be given to the following, which do not include any recommendation on the waterworks system as this subject is being handled under the supervision of another member of the Commission, Dr. A. T. McCormack of the State Board of Health.

1. Recruit the fire department up to full strength.

2. Organize and train an auxiliary fire fighting force equal to the number of men in the regular department. This force should be made up of volunteers not subject to the draft. Helmets, rubber coats and boots should be provided to permit full utilization of the auxiliary force in times of emergency.

3. Both the regular and the auxiliary forces should be given special training in the handling of explosives, the extinguishing of incendiary bombs, rescue and first aid, including victims of war gases, decontamination, and demolition. It is also urged that all men be trained in the complete darkness of a blackout so as to simulate conditions which will be encountered during an actual blackout. Efficiency will be increased if the location of all small equipment on the apparatus is standardized so that the men will know just where to put their hands on it. Hydrants can be easily found if a white line of a distinctive pattern is painted across the street at the location of the hydrants. White or luminous paint on the ends of ladders and on hose couplings will add to the safety and speed with which some evolutions can be performed.

4. Additional apparatus, if needed, should be ordered. A recent survey showed that in many towns some of the apparatus is so old as to be of questionable reliability and that most towns do not have sufficient ladders or 2½-inch hose to cope with unusual conditions. In many cases a serious deficiency was noted in the amount of small hose with the necessary couplings to permit two or three small lines to be supplied by a large one. Consideration should be given to the purchase of trailer pumps, which have been used so successfully in London. Also, larger towns might consider the purchase of some additional 3-inch hose to be used in relaying water in the case of broken mains. Surplus hose of various sizes could be loaded on special 2-ton trucks ready for transportation to the scene of fire with the least possible delay. Every department should be equipped with spray and fog nozzles, which have a definite purpose and can be used on all types of fires, but the fog nozzle's main advantage is in use on flammable liquid fires. Nozzle holders and monitor-type deluge nozzles conserve manpower. Many departments carry portable electric generators to furnish current for flood lights. These are also useful as reserve units in case the power service is disrupted. They are inexpensive, and a 2,500-watt unit weighs less than 150 pounds. Arrangements should be made for the prompt delivery of gasoline to the apparatus while it is in action.

5. Plans for mutual assistance among nearby towns should be worked out and, where hydrant threads are not the same, adapters should be carried on the apparatus.

6. Air whistles or coded sirens should be installed on fire houses for calling the off shift or auxiliaries to duty and for transmitting other signals and alarms if necessary.

7. Arrangements should be made for the receiving and transmitting of fire alarms in event the fire alarm and telephone systems are disrupted. Consideration might be given to two-way radios and messengers on bicycles or motorcycles.

8. Each fire company should have maps showing the waterworks distribution system, including the location of all control valves and hydrants. Officers should familiarize themselves with the layout in the territory to which their companies respond.

9. Regular inspections should be made of all places of business, churches, schools, hospitals, and industrial plants to see that premises are kept clean inside and out; that dilapidated buildings which are usually conflagration breeders are torn down or repaired; that hazardous chemicals, oils, and supplies are kept in a safe place and reduced to the smallest possible amount; and that all fire hazards are properly safeguarded. It is suggested that a day be set apart on which all citizens be requested to clean the attic, basement, hall closet, and back yard of their homes.

10. If you have not already done so, may we suggest that you adopt a suitable fire prevention ordinance. We can furnish you with a very comprehensive ordinance suggested by the National Board of Fire Underwriters.

11. Fire department officers should thoroughly familiarize themselves with all industrial plants and especially with gas works, oil and gasoline storage plants, and other risks where dangerous substances constitute a special fire hazard.

12. Additional hydrants on adequate mains should be provided where necessary to properly protect industrial plants. In some cases additional hydrants may be needed in the mercantile district and in the built-up residential section.

13. Emergency sources of water supplies, such as cisterns, ponds, and wells, should be located and arrangements made to use them if necessary. If a stream flows through or is adjacent to a town, approaches should be built to enable a pumper to take suction and, if the stream is shallow, suction pools should be provided.

14. The management of industrial plants should be requested to cooperate with the fire department by providing as much private fire protection as possible, including fire brigades to be trained by the officers of the fire department. Arrangements should be made for the fire brigades of these plants to assist the fire department in event of an emergency anywhere in town. The officer in charge of fire protection or the chief of the fire brigade of the larger plants should be urged to attend the Fire College to be held in Lexington July 28 through July 31. Attention should also be called to the schools for watchmen which will be held in the fall under the auspices of the Civil Defense Commission in various parts of the state. These schools will be conducted by State Fire Marshal D. P. Vandivier.

15. To guard against sabotage, strangers should not be allowed to loaf around a fire station or the apparatus. Fire alarm headquarters should be under guard at all times, and the fire alarm system should be under careful and constant supervision so that any tampering will be detected as soon as possible. In small towns having volunteer departments, a dormitory addition to the station should be provided and arrangements made for several of the single men to sleep therein. Unless a man is on duty all the time, the fire station should be kept locked, each volunteer being provided with a key, and the exterior of the building well lighted.

In addition to rendering the fire alarm system inoperative, there are many ways in which the department may be crippled. For example, foreign material in the lubricants for engines and pumps might put them out of commission after a very short period of operation; foreign material in the fuel tank might cause a piece of apparatus to stall before reaching the fire; similar results can be attained by tampering with the fuel line or the ignition system on apparatus, or by placing small metallic objects where they will become engaged in the gears and damage them. Hydrant valve stems and threads are particularly subject to attack and danger. Hose can be severely damaged by the use of corrosive chemicals or by cutting with a knife; also, objects may be inserted in the hose which might block the nozzle.

16. If you need any assistance in conducting this survey, the Civil Defense Commission has at its disposal the engineers of the Kentucky Actuarial Bureau.

Maine. Insurance Commissioner Pearce J. Francis of Maine has urged fire chiefs of his state to organize auxiliary fire forces. The Insurance Department has offered to supply chiefs copies of training bulletins and instruction material. It has been suggested that auxiliary firemen be recruited from men in the 28 to 35 age group recently deferred from selective service.

New York. Dr. Lewis A. Wilson, director of the state defense vocational training program, announced last month that auxiliary and volunteer firemen will be given a uniform training course to enable them to cooperate with city fire departments in the event of sabotage or bombing.

Nassau County, N. Y. Last month the County Fire Commission sent to each fire department Bulletin No. 40 containing a fire defense questionnaire covering fire department personnel. The information is being assembled for the New York State Committee on Fire Defense. The following subjects are covered in the questionnaire.

1. Membership, paid and volunteer.
2. Pump operators.
3. Fire prevention inspectors.
4. First aid men.
5. Emergency relief squads.
6. Number of men who have had fire defense training.
7. Number of fire department physicians.
8. Fire-police squads.
9. Draft classifications of officers and men.
10. Number of men who have served in paid department.

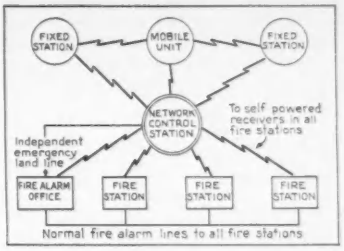
Virginia. Fire training zone schools covering the subjects of detection and prevention of sabotage, arson, incendiary bombing and chemical warfare are being organized by the Virginia Fire Protective Mobilization Committee.

Amateur Radio Network Can Provide Emergency Signaling

THE Smoke Eaters Radio Club, composed of fire department officers and men holding amateur radio operators licenses, have proposed a plan for an emergency radio network to handle fire alarms. The network would be used in the event that normal communications and signaling systems are put out of service by air raids or by any other disaster. The network plan suggested by the S.E.R.C. in a recent bulletin sent out by President George L. Bird, Assistant Fire Chief, Pawhuska, Oklahoma, has been tried out already under approximate emergency conditions, having been used successfully by the Amateur Radio Defense Association during a test blackout in Seattle, Washington.

Because normal power facilities are likely to fail during an emergency, all operations are by self powered equipment. For an effective network many specific details must be worked out locally in cooperation with the fire chief, superintendent of fire alarm, and the local radio club. Each amateur radio station cooperating should be given written instructions so that nothing will be left to chance. All emergency operations must conform to rules and regulations of the Federal Communications Commission limiting operations of amateur radio stations.

The following organization chart indicates the suggested set-up.



This proposed emergency radio network has been compared with the old watch tower system in vogue before modern fire alarm facilities were available. In the event that emergency signaling is needed, observers are placed at vantage points to cover assigned areas. If smoke or fire is seen it is immediately reported to the nearest fixed emergency radio station. The call is then relayed to the network control station from which the communications officer on duty will call the fire department. It might be possible to locate the network control station in the fire alarm office. Mobile stations are to be used to supplement fixed stations, cover special assignments, and to respond to fires to furnish communications between the fire grounds and the fire alarm office.

According to the S.E.R.C. plan, the communications officer who directs the operation of the network control station must keep records of all available equipment, operators, observers and assistants. He should know where to locate them at any time day or night. As the network control station may have to operate on a 24-hour basis in an emergency, at least three operators should be assigned to work in shifts. Observers do not have to be trained as radio operators. Any reliable citizen can do this work.

It is suggested that when a local radio communications network has been organized and a communications officer has been selected, a test be run to see how the plan works under local conditions.

★ ★ ★ ★ ★

Fires Rage Unchecked in Virgin Alaskan Forests

THE Alaskan Fire Control Service, operating on a limited appropriation, quickly and cheaply suppressed forest fires which started within reach of its limited facilities in the interior of Alaska during the summer of 1940. Operations are principally centered along The Alaskan Railroad and along highways radiating from Anchorage and Fairbanks. Elsewhere on the 300,000,000 acres of timberlands, theoretically under its protection, fires ran unchecked for want of funds and equipment with which to combat the flames.

—*The Alaskan Sportsman*

Bomb "Taxis"

A Discussion of Some Factors Involved in the Transportation of "Infernal Machines"

THE handling of explosive bombs is work for the police department and bomb experts. Nevertheless, in these days when firemen are studying problems of sabotage and fire defense it may be considered desirable for firemen to make themselves familiar with some of the considerations involved in the handling of bombs. Firemen must be able to protect both themselves and the public in the event that a fire alarm is sounded upon the discovery of some suspicious package or suspected bomb. In any event the fire department has an important job in seeing that precautions are taken to guard against any fires which may be started by the explosion of a bomb.

Almost all persons who know anything about bombs agree that there is no entirely safe way to handle a bomb or a suspected bomb. It is a very ticklish job. One of the cardinal principles in dealing with explosive bombs is that they should not be moved except when the possibility of loss to life and property justifies some individual risking his life to attempt the removal. Even then only one person at a time should come within range of the bomb.

Shown on these pages are types of bomb conveyances recently placed in service in several American cities. These conveyances have successfully resisted test bombs of limited explosive force. However, there is some question whether there is any type of bomb container that can be relied upon to resist bombs containing any appreciable amount of dynamite or other powerful explosive.

According to Provincial Fire Marshal W. J. Scott of Ontario, who has made a study of the problem of handling bombs, unless a bomb container is of the thickness and strength of the breech of a naval gun it is impractical to construct a conveyance that will withstand the concussion of a large bomb explosion. Some bomb conveyances are made of boilers or boiler plate. Boilers are normally made to withstand pressures of several hundred pounds per square inch. On the other hand, Marshal Scott points out, dynamite has a force as high as 100 tons per square inch. Obviously, a bomb cart constructed of boiler plate cannot be expected to confine such terrific explosive force and there is danger that iron fragments will be hurled in all directions.

Marshal Scott points out that there is also a serious danger that bomb containers of such rigid construction would confine and thus increase the force of an explosion. The effect of putting one rigid container inside of another rigid container, as has been done in the construction of some bomb conveyances, would not tend to absorb the explosive force. Neither would any packing between two containers be effective if the inner container is rigid and cannot expand without fracturing.

Bridgeport Police Department photo

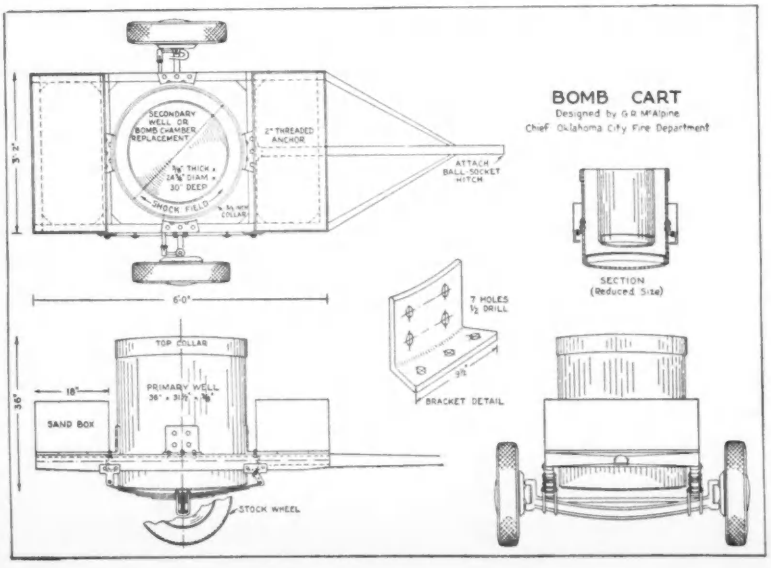
This conveyance constructed by mechanics of the Bridgeport, Connecticut, police department is called a "bomb buster." Made from an old upright steam boiler reinforced by 1-inch steel cable wound around the tank, the bomb container is mounted on a heavy trailer chassis having truck type springs and protected by a 1-inch sheet iron deck to which the bomb tank is welded.

In the rare cases where a bomb must be transported a considerable distance before an open space can be found, a bomb conveyance should be used. The consensus seems to be that such bomb taxis should have sloping sides to deflect the blast upwards. It also seems desirable to have an oil container in which to place the bomb because light lubricating oil or coal oil tends to stop bomb clock works, lessens the hazard of sparks and electrical currents, and has inactivating qualities as it penetrates the explosive mixture of the bomb. However, rather than have a rigid container for the oil, it might be better to use a heavy canvas container with a packing of mattresses or similar material between it and the sloping sides of the bomb taxi. It might also be desirable to construct the sloping sides of the conveyance of light boards which will fracture easily rather than confine the force of the explosion.

A third important consideration in the design of any bomb conveyance is the desirability of providing space around the container for the placing of sand bags.

The following practical suggestions on the handling of bombs were contained in a lecture delivered by Provincial Fire Marshal W. J. Scott of Ontario to the Firemen's Training School held at the University of Toronto last winter.

"If the bomb is to be left in its original location, measures should be taken at once to deflect its energies and so lessen the damage when it detonates. Some of these measures are:



1. Clear the building or danger area of all occupants to avoid injury from flying fragments or debris.

2. Use extreme caution to ensure that the bomb is not moved or disturbed, nor any nearby object moved that might be connected with a trigger mechanism.

3. Establish an organized guard outside the danger area to keep persons away, and allow only one person at a time to go near the bomb.

4. If the bomb is in any building, open wide all doors and windows to allow any blast to disperse more easily.

5. Surround the bomb or suspected bomb with sandbags or felt mattresses to localize and direct the severity of the anticipated blast to the direction where it will do the least harm. Be careful to utilize mattresses without metal springs, as these might become missiles. For sandbags use small bags that can be easily handled. It is important that the barricade be not so close to the bomb as to add to the force of the explosion. The protection should be built at an angle to deflect the blast rather than to try to stop it, and also should be flexible rather than too rigid.

6. Remove any flammable materials from the surrounding area, and shut off all gas, electric, steam or compressed air lines.

7. Salvage from the area any valuable machinery or equipment which can be moved or build special protection of sandbags or mattresses for important fixed equipment, walls or pillars.

8. Have fire fighting apparatus available to quell any fire that might be started by the detonation of the bomb, and arrange also for medical aid in the event anyone sustains injuries.

9. Send for a bomb or explosives expert to handle the bomb, contacting police, Army or Navy ordinance officers, mining or explosives experts.

Moving Bombs

"If the bomb has to be moved, most of the preliminary precautions listed above would be taken, not only in the immediate location of the bomb, but also along the route to the place of safety. There are the following further suggestions:

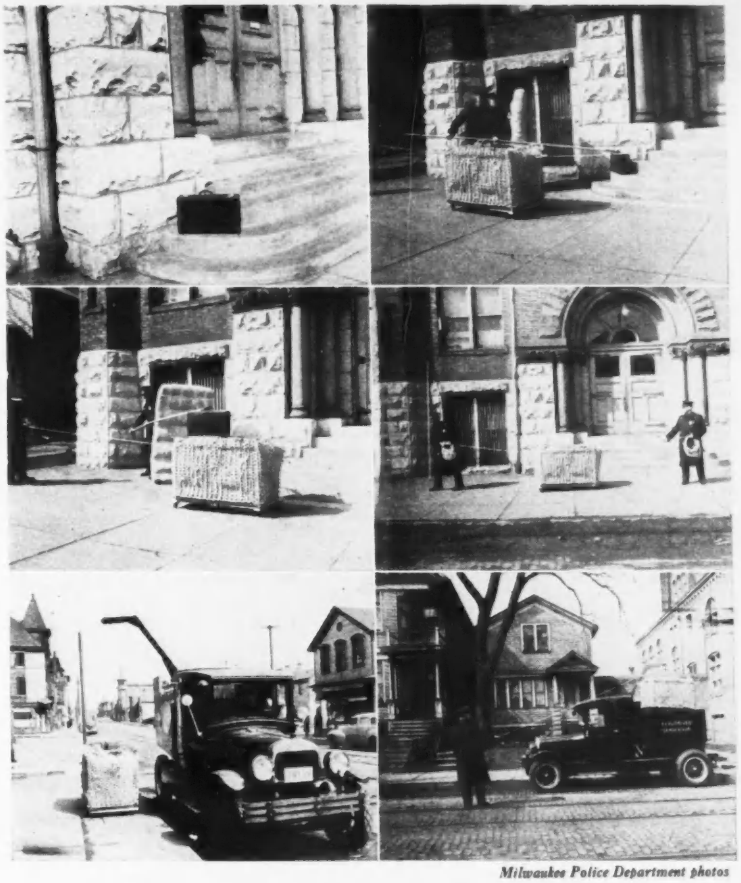
1. Avoid turning the bomb on its side or upside down, and also avoid any shocks or jars.

2. A shield consisting of a heavy felt mattress will afford a certain amount of protection if kept between the operator and the bomb.

3. Occasionally a bomb can be moved to a less hazardous location by dragging it with a rope at least 50 feet long. Care must be taken not to upset or tilt the bomb or to subject it to any rough treatment.

4. If the bomb has to be picked up and carried, gloves worn by the operator might give some protection against burns, if the bomb is incendiary, and would also aid in preserving any finger-prints on the bomb.

5. If the bomb has to be transported any considerable distance, avoid densely populated areas or heavy street traffic, and take every precaution to avoid any shock or a collision to the vehicle used. The use of a trailer will separate the bomb a greater distance from the driver.



Milwaukee Police Department photos

Bomb Conveying Vehicle of the Milwaukee Police

Reading left to right. 1. Picture of a case suspected of being a bomb. 2. Officers prepare to transfer suspected bomb into rope basket using long poles. 3. Shielded by especially constructed mattress, officers place suspected bomb in rope basket. 4. Suspected bomb has been placed in basket and ropes long enough to permit operations at a 100-foot distance are used to pull basket into position for loading on bomb truck. 5. Officers inside cab, protected by boiler plate and bullet-proof glass, manipulate derrick to lower hook over bomb basket. 6. Officer outside, by use of 100-foot rope, pulls basket into position directly over hopper of bomb conveyance truck. Basket is then lowered into hopper of truck.

6. Special vehicles have been designed for the transport of bombs. One type has layers of mattresses to protect the driver and to deflect the blast upwards where it will do least harm. Another type has a large tank with sloping sides and an open top, and containing oil in which the bomb can be immersed.

7. In all the above, only as few persons as possible should be near the bomb, and if possible all the operations should be carried out by only a single individual at a time.

Never Put Bombs in Water.

"Among misconceptions as to the proper procedure in handling bombs is the entirely incorrect theory that immersing a bomb in water renders it safe. As a matter of fact, immersing a bomb in water will frequently detonate it. In the case of a bomb containing an electrical mechanism, water might cause a short circuit and result in detonation. Or the bomb may contain one of the metals that burst into flame if they come into contact with water, or an acid that is affected by or floats on water. Even a fuse and dynamite bomb will not be affected by water if a water-proof fuse and blasting gelatine are used. On the other hand, if dynamite is left some hours in water there is a tendency for the nitroglycerine to become separated from the other materials, thereby presenting all the dangers of liquid nitroglycerine. If it is essential to use some quenching agent, light lubricating oil or coal oil are the best to employ to lessen the danger of detonation. The oil tends also to stop any clockwork mechanism.

"One objection to the use of liquids for inactivating bombs is that the liquid contamination renders subsequent chemical analysis difficult or impossible unless a very expert explosives chemist is available. Similarly, if a bomb is burned, there may be difficulty in proving that it contained an explosive. A somewhat similar objection applies to detonating bombs by rifle fire, as this destroys valuable evidence which might lead to the identification of the perpetrator."

N. F. P. A. Membership

Every member receives this handsome membership certificate.

Membership with unusual advantages is available to fire companies and fire departments through the Volunteer Firemen's Section of the National Fire Protection Association. Here's the simple plan:

INDIVIDUAL membership in the National Fire Protection Association costs $10 per year. The membership plan for the Volunteer Firemen's Section is designed to give each fire company the advantages of N.F.P.A. membership. The fire company, as a member, receives at its headquarters a complete set of all regular N.F.P.A. literature, including the *Quarterly* magazine, as issued. In addition, as a special service to the Volunteer Firemen's Section, each fire company holding N.F.P.A. membership is entitled to have copies of the magazine VOLUNTEER FIREMEN sent to the home addresses of 10 firemen each month. If more than 10 firemen want to receive the magazine, an additional $1.00 should be sent in with the membership fee for each fireman in excess of 10 enrolled.

Because of the large amount of material mailed to members, not less than $10 can be accepted from any company.

What's Wrong in These Pictures?

Often much can be learned by close scrutiny of fire pictures. Here are a couple of examples pointing out how pictures of fires may show little points in which fire fighting technique may be improved. Some fire departments have official photographers who take pictures of all important fires. The pictures are later studied in fire department training classes.

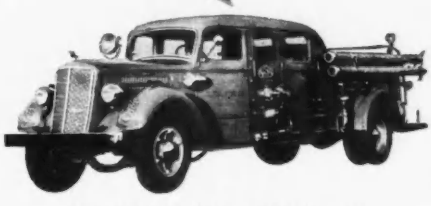
International

A ¾ or 1-inch booster hose is considered a one-man line when used for fighting building fires. Of course, when extending a long line into woods or brush more men are needed but when handling lines any extra manpower available may be considered wasted when the men gang up at the nozzle. One or two men at the nozzle are enough and other men should be spaced out so that the line may be moved quickly and easily without dragging. Certainly a dozen men are never needed within twenty-five feet of any nozzle. Untrained men often may be observed crowding a nozzle. Fire company officers should find some job for extra men which will be of use in bringing the fire under control.

International

Many firemen have been killed through needlessly overloading fire department ladders. After a line has been secured to a ladder and is in operation there is seldom need for more than two men to remain on the ladder at one time. One man can direct a properly secured nozzle and a second or "safety" man below can back him up. Additional men standing or lying on a ladder and trying to appear busy are just so much wasted manpower and dead-weight. They should find something useful to do or if at a smoky fire they are standing by to relieve the men at the pipe they should remain at the base of the ladder or at the turntable in the case of an aerial ladder. They will thus be quickly available without placing a needless stress on the ladder. The picture above is interesting because the stream from the ladder on the left is being controlled by two men while the ladder at the right is overloaded by four men of whom only one was doing any work at the time the picture was taken.

"I just leave it all to Mack!"



Type 505, 500 gallon centrifugal pumper with special 4-door cab. Being operated in State College, Pennsylvania.

THE confidence with which veteran officials and firemen depend on Macks to carry through has not been lightly earned. It is now 30 years since the first Mack fire engine went into action. And every fire engine Mack has turned out since then has been built to the same high ideals of performance and stamina.

Mack concentrates on the manufacture of vital parts *in its own factories under the closest possible supervision*—uses the finest of materials and the most exacting production methods.

Because Mack has the largest resources in the industry, Mack also is able to carry on a unique research program. Out of this program come the new knowledge and skills which keep Mack quality unequalled.

70 conveniently located direct factory branches assure service that is quick, economical, and efficient—whenever and wherever needed.

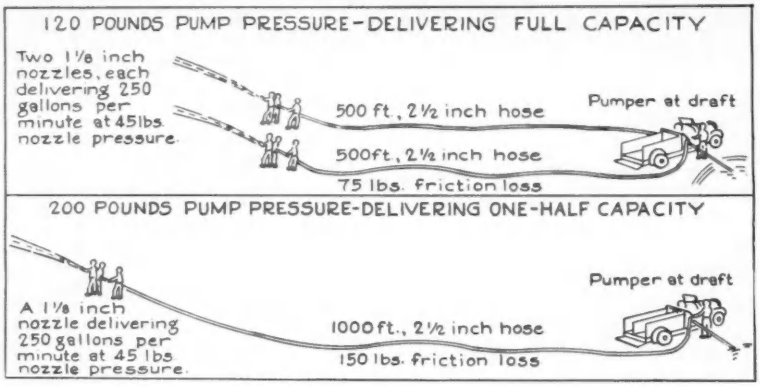
Write for complete information on this superior fire apparatus today!

The Mack Fire apparatus line includes triple and quadruple pumpers from 200 to 1500 gallon capacity, hose wagons, city service ladder trucks, squad cars—comprising 14 distinct and specialized models. Mack is proud of building the best. We invite comparison. We solicit inquiries.

Mack

MACK MANUFACTURING CORPORATION, FIRE ENGINE DIVISION, NEW YORK, N. Y.

What Work Will a 500-Gallon Pumper Do?


120 POUNDS PUMP PRESSURE-DELIVERING FULL CAPACITY
Two 1⅛ inch nozzles, each delivering 250 gallons per minute at 45 lbs. nozzle pressure.
500 ft., 2½ inch hose
Pumper at draft
500 ft., 2½ inch hose
75 lbs. friction loss
200 POUNDS PUMP PRESSURE-DELIVERING ONE-HALF CAPACITY
A 1⅛ inch nozzle delivering 250 gallons per minute at 45 lbs. nozzle pressure.
Pumper at draft
1000 ft., 2½ inch hose
150 lbs. friction loss

ALTHOUGH modern fire department pumpers are available in capacities up to 1,500 gallons per minute, the 500-gallon pumper undoubtedly is the most widely used by volunteer fire departments. While the 500-gallon-per-minute pump is the smallest pumping capacity generally recognized as suitable for municipal fire protection, it is a very formidable fire fighting unit. In many situations fire departments have found it advantageous to operate two such pumpers rather than one pumper of larger capacity.

In view of the widespread use of the 500-gallon-per-minute pumping unit many volunteer firemen may be interested in knowing just how much work may be done with a pumper of this size. A practical way to measure the amount of work a pump can do is to determine what sort of fire streams it can supply at its rated capacity when operating at draft. While it is true that when taking water from an unusually strong hydrant supply or when forced to operate at excessive speeds, a pump may be able to give more water than it is rated to deliver, it is good practice to make layout plans in conformance with the performance rating of the pump.

A standard 500-gallon pumper will, of course, give its full capacity with a pump discharge pressure of 120 pounds when operating from draft. On the other hand a 1⅛-inch nozzle will discharge 250 gallons per minute when the nozzle pressure is 45 pounds per square inch. Thus the 500-gallon pumper can supply two 1⅛-inch nozzles at 45 pounds nozzle pressure and have a leeway of 75 pounds which may be used to overcome friction loss in the fire hose, or pressure loss due to any elevation of the nozzle above the pump.

As the friction loss in a 2½-inch line with 250 gallons per minute flowing amounts to 15 pounds for each 100 feet of hose, it will be seen that a 500-gallon pumper can supply two 500-foot lines with 1⅛-inch tips discharging at 45 pounds pressure. A standard load of 2½-inch hose carried on a pumper is about 1,000 feet. Thus it remains that a 500-gallon pumper can "spill" its entire load to make two lines and supply a 1⅛-inch tip on each line.

When a 500-gallon pumper is operating at 200 pounds pressure it is designed to deliver only one-half of its full capacity, or 250 gallons per minute. At 200 pounds pump pressure it can supply one 1⅛-inch nozzle discharging at 45 pounds pressure. However, the additional pressure is sufficient to overcome the friction loss caused by 250 gallons per minute flow in 1,000 feet, or a full load of 2½-inch hose used in one line. At the same time there is sufficient pressure to raise water a dozen or more feet while supplying a 250-gallon stream at the end of the 1,000-foot line.

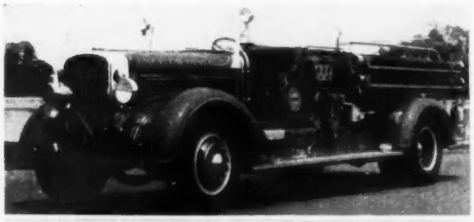
While these layouts are those designed to utilize the full capacity of a 500-gallon pumper, it should be remembered that when higher nozzle pressures are wanted or streams are to be used at high elevations at the end of long lines, it may be good practice to use smaller nozzle tips even though the full capacity of the pumper may not be utilized.

REASONS why many volunteer fire departments prefer two 500-gallon pumpers rather than a single large 1,000-gallon unit are the much greater flexibility of operation and additional hose and water tank capacity thus obtained. In residential and rural areas where water supplies are limited the fire department may want to pump from several isolated sources to obtain sufficient water.

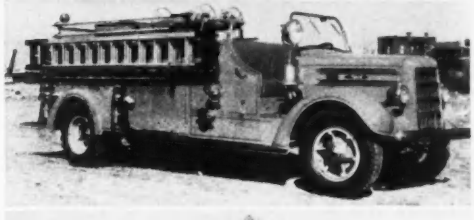
Where long lines are required, the use of two 500-gallon pumpers in relay has considerable advantage. Two 500-gallon pumpers, each operating at 120 pounds pump pressure, can deliver 500 gallons of water through 250 feet more hose than can a 1,000-gallon pumper working at 200 pounds pressure. It might be mentioned also that with two pumpers a department does not have to shut down for repairs.

SOME RECENT DELIVERIES OF FIRE APPARATUS

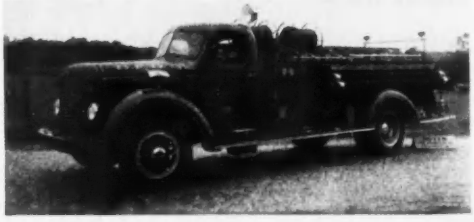
This 750-gallon triple combination pumper has been delivered to the Borough of Downingtown, Pennsylvania, by the Autocar Company of Ardmore, Pennsylvania. This new "deluxe" pumper has been placed in service with the Minquas Fire Co. No. 2 of Downingtown, and in one of two new pieces of apparatus furnished to the Borough by Autocar.



Mack Trucks Inc. recently delivered to the Consolidated Aircraft Corporation plant at San Diego, California, this Type 45, 500-gallon pumper. The pumper carries a 300-gallon booster tank and 600 feet of booster hose on two reels, 1,000 feet of 2½-inch hose and 300 feet of 1½-inch hose, foam generator and foam applicators, asbestos suits and blankets, and carbon dioxide equipment.



This 500-gallon pumper delivered to Bremen, Indiana, by the Boyer Fire Apparatus Company of Logansport, Indiana, is designed to give good service in rural areas. The apparatus carri s two booster hose reels and a 400-gallon water tank. Three lengths of suction hose are provided to permit taking suction from rural water sources.



State Fire Schools, 1941

7th Wisconsin	Aug. 13-14	Madison
4th Kentucky	Aug. 19-21	Covington
Oklahoma Instructors' conf.	Aug. 4-8	Stillwater
Unit training	Aug. 11-29	
11th Washington	Aug. 21-23	Yakima
3rd Pennsylvania	Aug. 25-29	State College
13th Kansas	Sept. 2-5	Lawrence
12th Maryland	Sept. 2-5	College Park
2nd Montana	Sept. 21-27	Polson

TRAINING NOTES

Illinois. The report of the 17th Illinois Fire College held June 10-13, shows a record attendance of 584 men with 169 fire departments represented.

Maryland. A new Firemen's Training Course—Industrial, designed for members of industrial fire brigades, has been announced by Chief J. W. Just, Director, Fire Service Extension, University of Maryland. The course is presented in a 310 page text covering fifteen lessons as follows: Inspections; Fire hazards; Fire extinguishers—uses and limitations; Minor fire fighting equipment and forcible entry; Rope, its uses in the fire service; Hose, nozzles and fire streams; Ladders and rescue; Gas masks, gases and rescue; Ventilation, fire control and extinguishment; Special fires; Salvage; Incendiary fires—evidence and its protection; Automatic sprinklers and automatic fire protection devices; and Outside practice and demonstration of fire extinguishing devices. The text is available from Chief Just at College Park, Maryland, at a cost of $2.00.

Ulster County, New York. A 30-hour course was completed last month in the County Firemen's Training School. The sessions were held at Kingston, N. Y., under the direction of Battalion Chief James J. Deasy. The average class attendance was 350 men.

Pennsylvania. A report of the activities of the Public Service Institute for the State Department of Public Instruction has been issued recently. This report covering the years 1938 to 1941 shows a remarkable increase in firemen's training activities in the state. In the 1940 to 1941 school year, 115 firemen's training classes with 3408 men enrolled have been held in comparison with 40 classes with 1246 men enrolled during the 1938 to 1939 training period. The fire school course on "Fundamentals of Fire Fighting" consists of 18 weekly sessions of three hours each, or a total of 54 hours instruction. The Pennsylvania Public Service Institute was established for the purpose of in-service training of public employees under the George-Deen Act passed by Congress in 1936.

HERE IT IS!

THE M.S.A. Streamlined FIREMAN'S HELMET

FEATURING

- Wide, arched side brims
- Long, sweeping rear brim
- Reinforced crown ridge
- Laminated bakelite construction

This smart new M.S.A. Helmet checks at every point with the needs and preference of today's firefighters! It gives you the *safety* you must have when head hazards threaten—the lightweight, heat-shielding and water-shedding *comfort* you require—and plenty of streamlined *beauty* you'll appreciate when you ride your apparatus on parade! It takes two pages to tell the story of this great Helmet's modern design and construction—write today for Bulletin No. DX-5!

We will gladly arrange to show the M.S.A. Streamlined Fireman's Helmet.

MINE SAFETY APPLIANCES COMPANY
Braddock, Thomas & Meade Sts. · Pittsburgh, Pa.
District Representatives in Principal Cities

FOR AMERICA'S PREPAREDNESS

NOW is the time to organize and rehabilitate your fire defenses!

Do you have enough Fire Hose on hand so that if fire broke out in 10, 20 or 30 places you could keep it under control?

The people of your community depend on YOU!

CHECK OVER YOUR RESERVE FIRE HOSE NOW.

GENUINE WAX AND PARA GUM TREATED FIRE HOSE

FABRIC FIRE HOSE COMPANY
SANDY HOOK CONNECTICUT

FEDERAL VERTICAL SIRENS

are known for

- DEPENDABILITY
- HIGH QUALITY
- ADEQUATE POWER

made in capacities from 1 to 7½ hp.

Federal Electric Co., Inc.

"Siren Headquarters"

8717 S. State St. Chicago, Ill.

FYR-FYTER

INSTANT

Saves Human Life

When Mr. and Mrs. Ladd, while returning to their farm home with a new auto, ran off a culvert and overturned, killing Mr. Ladd and pinning Mrs. Ladd under the car which was rapidly being consumed by flames—a neighbor of the Ladds, Mr. A. O. Barrett, came to the rescue with his 1¾-gallon Instant and the flames "died instantly." According to the last report from Dealer Frank Tilton of Washington C. H., Ohio, "I am glad to report that hopes are held for Mrs. Ladd's recovery."

SALESMEN WANTED

If you are interested in adding to your income by spare time work or in building a permanent business for yourself without investment in stock, fixtures, etc., write for our new Dealer's Plan to

THE FYR-FYTER COMPANY

Dept. 20-68 DAYTON, O.

Underwriters' Laboratories Conduct Field Tests in Air-Cooled Trailers

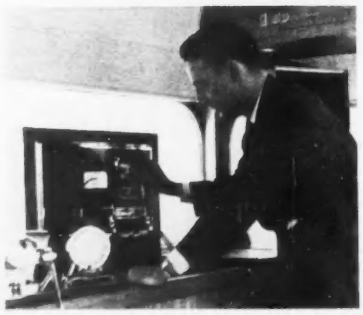
MANY volunteer firemen doubtless are familiar with the "red trucks" sent out by Underwriters' Laboratories, Inc. to conduct field tests of electrical products bearing the laboratories' labels. After travelling 200,000 miles throughout the United States in the past five years, these trucks are being replaced by three ultra-modern trailer-laboratories. With the new trailer units in service it is planned to expand the work of the travelling laboratories. The usual testing in the field of approved fuses, wires, cables, and other electrical products obtained from retail stores, jobbers, or contractors, will be carried on. In addition, the engineers in charge of the trailers will call upon city officials, electrical and building inspectors, insurance inspection offices, fire chiefs and fire marshals, and other persons interested in electrical and fire safety.

The new trailer laboratories also will be available for displays and demonstrations at meetings. The engineers in charge of the units are qualified to talk on the activities of Underwriters' Laboratories, Inc. While the engineers use the loud speaker systems provided in the trailers to explain the tests, spectators may watch the demonstrations through large side windows.

Air conditioning equipment has been provided to make the trailers comfortable workshops in hot weather. Fluorescent lighting systems, believed to be the first installed in any mobile unit, provide another innovation. The lighting systems are operated by connecting a cable to any 110 volt supply. The trailers embody every known safety requirement and are wired to comply in every respect with the National Electrical Code.

The engineers in charge of the mobile units purchase, in the open market, samples of products bearing the labels of Underwriters' Laboratories, Inc. This is done to make sure that labeled products continue to meet the standards upon which approval was granted. In the past five years 10,000 market samples have been bought and sent back to the Chicago headquarters of Underwriters' Laboratories, Inc. In the same period 15,000 samples were tested in the field by the old mobile units.

Considerable testing equipment is provided in each of the new trailers. Tensile strength machines permit testing of insulation of wires and cords. A propane gas system makes possible flame tests on wire insulation. A step-down transformer providing as much as 100 amperes at low voltage is arranged for rating, blowing time, and temperature tests on cartridge and plug fuses. Calibration and overload tests on circuit breakers are made on the same apparatus.



One of three new air conditioned trailer laboratories to be placed in operation by Underwriters' Laboratories, Inc. These units are used to conduct field tests of electrical equipment bearing the laboratories' labels. The trailer shown will cover the eastern part of the United States and is operating in New England this summer. It will later go south through the Atlantic states. At the left, laboratories field engineer George Hilton is shown conducting a test inside the trailer. A second new trailer-laboratory is now working in California and is headed for the northwest. When ready, the third mobile testing station will operate in the middle west.

WE HAVE SOMETHING HERE YOU'LL LIKE . . .

INDIAN

CLEAR WATER FIRE PUMP EXTINGUISHERS

NATIONAL DEFENSE THROUGH FIRE DEFENSE!

★ ★ ★

5 Gal. Armco Rust Resistant Tank

•

Also Furnished with Highly Polished Solid Brass Tank

Now, More Than Ever, Smaller Fires Must Be Quickly, Easily Controlled

DEFENSE places more than the usual demand on fire fighting methods. The ideal manner in which INDIANS handle small fires QUICKLY, POSITIVELY and CHEAPLY makes them "must" equipment for every department. Using clear water, there is no chemical expense—no damage from ruinous acids. It has been estimated that over 70% of the calls in the average city or town CAN BE HANDLED WITH ONLY

The Famous INDIAN FIRE PUMPS!

Think what this means. Estimate the saving in TIME, in MONEY, in EFFORT. If you are now using INDIANS, you are familiar with what they can do. If not, we urge that you get several pumps and put them to the test—find out for yourself why fire departments from Maine to California say, "Give us INDIANS and we'll do the job."

WHAT USERS SAY:

D. B. SMITH & CO., Utica, N. Y.

Gentlemen: Your INDIAN FIRE PUMP saves us plenty of time and labor in many cases when we are called out on an alarm because we do not have to lay any hose and the INDIAN prevents a lot of lost time since when we reach the fire we grab the INDIANS from our truck and go to work. They do their work and do it well. Any fire department will save time and labor, also chemical expense if they will equip with INDIANS as we have done.

E. P. REMY, Secretary.

D. B. SMITH & CO., Utica, N. Y.

Gentlemen: I had no idea INDIAN FIRE PUMPS were such a valuable piece of equipment. With the exception of four or five alarms, we have used INDIANS at every fire and in most instances completely extinguished it with no other extinguishing agent. They make no mess and the clear water harms nothing.

E. E. SALGE, Fire Chief.

Send for Catalog and Price List

Showing chrome-plated unit in use. Highly polished brass tank is also extremely popular with fire departments.

D. B. SMITH & CO. 413 MAIN STREET **UTICA, N. Y.**

PACIFIC COAST AGENTS:

Hercules Equipment & Rubber Co., 550 Third Street, San Francisco, Cal.

Coyne-Cowshill Sales Co., 520 S. W. Pine St., Portland, Ore.

Hill & Hine Supply, Inc., 2700 4th Ave., S., Seattle, Wash.

The Cowshill Co., Klamath Falls, Ore.

Ray G. Davis Co., 617 E. 3rd St., Los Angeles, Cal.

IN CANADA

Safety Supply Co., Toronto, Montreal, Vancouver

AIR WARDEN HELMETS

Approved model, made of U. S. Government-formula bullet-proof steel—olive drab color—complete with self-adjusting cushion lining and leather chin strap. Write for prices, wholesale and retail.

Since 1836, CAIRNS HELMETS AND FIREMEN'S EQUIPMENT have been a standard in most departments. Under the present Defense Program we have furnished helmets to more than 20 Government agencies, including camps, navy yards and arsenals.

Write for Catalog 30C

CAIRNS & BROTHER
444 LAFAYETTE ST. NEW YORK

RURAL FIRE DEPARTMENTS

1940 EDITION

A 32 page pamphlet
Price 20 cents

This pamphlet prepared by the N.F.P.A. Committee on Farm Fire Protection contains helpful suggestions for the operation of volunteer fire departments.

CONTENTS

I. Equipment, Apparatus

II. Organization

III. Volunteer Fire Department Ordinance and Rules

IV. State Legislation for Fire Department Organization

National Fire
Protection Association
INTERNATIONAL
60 Batterymarch St., Boston, Mass.

$10.00-$3.00-$2.00 EACH MONTH

PYRENE PRIZE LETTER CONTEST

THIS is a contest for firemen. Any fireman, whether a private or a chief, whether volunteer or paid, has the same chance to win in this easy contest designed to show what can be done with approved fire extinguishers. Persons not holding membership in a fire company or a fire department cannot enter this contest which is limited to firemen.

You have probably been present at numerous fires where approved fire extinguishers have been successfully used. Every month cash prizes are paid out to those whose letters contain the best stories. More fires are put out with fire extinguishers than by any other means. The stories reported in this contest show the value of having an extinguisher handy.

It's the story we want, not letter writing ability. Get the facts down on paper and we will attend to any rewriting necessary to get the story into the space available in these columns. Be sure to give your fire department connection when writing as the contest is limited to fire department or fire brigade members.

The contest is sponsored cooperatively by the Pyrene Manufacturing Company of Newark, N. J., and VOLUNTEER FIREMEN to bring forth the lessons learned from actual fires of the value of fire extinguishers.

FIRST PRIZE—$10.00

S. A. CONRAD, Captain,
Fire Department,
Bridgewater, Nova Scotia

Saved Wooden Block

One morning last month at 6:30 a.m. while unlocking the doors of the Federal Building in the center of town, I noticed smoke coming from the top of a three story building across the street. I immediately took a 2½-gallon soda acid extinguisher from the vestibule and went to the second floor. After assisting two families from the building I went to a small bedroom where the bedding and wall were ablaze. I used the extinguisher and put the fire out to such an extent that when the fire department arrived it was not necessary to use any water in the building. The bedding was removed to the outside and the fire completely extinguished. The building in which the fire occurred was one of a block of eight, all of wooden construction.

SECOND PRIZE—$3.00

CARL HELLQUIST, *Pipeman*
Fire Department, Waukegan, Illinois

Fireman on Day Off

One day on my off day I was putting up screens when all of a sudden a neighbor from a nearby house tore into the yard and knowing me to be a fireman called over to me that her kitchen was afire. A gasoline stove had blown up while she was baking. I could see the flames through the back window of the house. I dashed into my house and called the fire department and then to my basement where I keep a 2½-gallon soda-acid extinguisher of the plunger type. Running with the extinguisher I jumped two small fences to reach the fire. From the kitchen door I played the extinguisher on the fire and when the fire department arrived about three minutes after the neighbor first called, the fire was out.

THIRD PRIZE—$2.00

VIC EVERETTE
Fire Department, Fort Morgan,
Colorado

Hose Not Needed

We were called out to a fire in the basement of a house. Before turning on the hose we found the source of the fire was a large tub of cleaning fluid which threatened to start the entire house burning. Using a 1-quart carbon tetrachloride extinguisher the blaze was very quickly smothered and a fine home was saved lots of damage.

CONTEST RULES

1. Contestants in the Pyrene Prize Letter Contest must be members of their local fire department.

2. Letters are to describe actual experiences where an approved fire extinguisher of any make has saved lives or property.

3. Trade names may be used but will be deleted in publication. Publishers reserve the right to edit winning letters to permit publication.

4. Each contestant automatically vouches for the truth of the facts presented from his own or others' experience.

5. Only one letter may be submitted each month.

6. Letters must be legibly written in ink or typewritten on white paper, one side only. Preference will be given to letters not over 250 words in length.

7. Letters received after the 8th day of the month will be judged in following month's competition.

8. Monthly prizes in cash will be: 1st, $10.00; 2nd, $3.00; and 3rd, $2.00.

9. Address contest letters to Pyrene Prize Letter Contest, National Fire Protection Association, 60 Batterymarch St., Boston, Mass.

ANNOUNCEMENTS

THE fire department of Niles, Illinois, wishes to sell a 1922 Reo Speed Wagon fire truck having a 225 gallon booster tank, 30 g.p.m. rotary pump, and 150 feet of new booster hose. There is a hose body for 500 feet of 2½-inch hose.

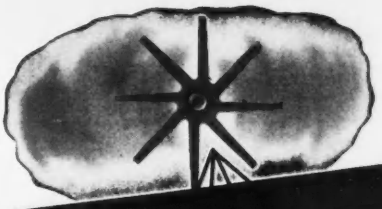
STEWART-Warner-Alemite Co., Ltd., Belleville, Ontario, are prepared to furnish stirrup-pumps similar to those widely used in Great Britain to control fires started by incendiary bombs. For quantity orders the price is $6.40 each in Canadian money. Due to the favorable rate of exchange the cost to U. S. fire departments should not be very high even though a duty would have to be paid.

H. S. COVER, 98 Chippewa St., South Bend, Indiana, announces manufacture of a new double sponge type smoke mask shown above. Each of the twin filter apertures of the mask contains a large fine textured sponge. The nose of the respirator is equipped with patented Dupor plastic valve that exhausts breathed air. The mask is foldable to fit in a pocket and weighs less than five ounces. The price is $2.00 when purchased in dozen lots.

NEW TEXTS

THE use of High Explosives and Incendiaries in War and Sabotage. (Educational Bulletin No. 7, 15 pages, 15c) International Assn. of Fire Chiefs, 24 West 40th Street, New York, N. Y.

THE United States Department of Labor has published three additional pamphlets in the series known as Bulletin 684, covering salaries and hours of labor in municipal fire departments. Volume VI covers sixteen East South Central Cities (States of Alabama, Kentucky, Mississippi, and Tennessee) having 2,140 fire department employees. Volume VII covers West South Central Cities. Twenty-six fire departments in the states of Arkansas, Louisiana, Oklahoma, and Texas, employed a total of 3,600 persons. Volume IX reports on 27 fire departments in Pacific Coast Cities.



A CENTRIFUGAL PUMP THAT PRIMES ITSELF

Just What Does this Mean?

A fire trailer gets the toughest jobs in the book — dirty water, rough handling, constant emergency duty. That's why LaBour's unique Self-Priming Centrifugal Pump means so much in Fire Trailer Service.

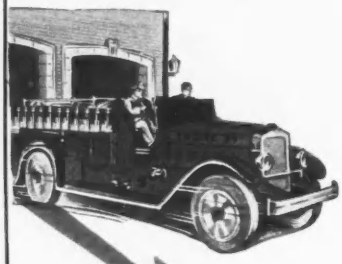
A CENTRIFUGAL PUMP with an open impeller is difficult to clog. The large clearances enable this pump to handle sandy water for years with negligible loss of efficiency due to wear. It needs no relief valve, no air chamber. It maintains pressure while running with the outlet or nozzle valves shut off, and delivers full volume instantly when the valve is opened — all without the slightest injury to pump or engine.

THAT PRIMES ITSELF means no automatic device to fail, no human attention required, no connection to engine manifolds. A LaBour Centrifugal is inherently self-priming just like a piston pump — it removes the air from the suction line and then pumps water *with the same impeller and casing.*

If you are looking for real service from a Fire Trailer, be sure to get a copy of LaBour Bulletin 47.

The LaBour Company, Inc.
1575 Sterling Avenue
Elkhart, Indiana, U. S. A.

The HEART OF THE FIRE DEPARTMENT



A conflagration hazard exists in practically every community, awaiting only the outbreak of fire under adverse circumstances such as storm, high wind, or skillfully planned sabotage, coupled with a Delayed Alarm to destroy in an hour the result of years of industry. Now, more than ever, with the security of the industrial processes essential to the National Defense at stake, time is the vital element in the control of fire, and only equipment of demonstrated reliability and efficiency should be considered for this vital service.

Gamewell manufactures and installs fire alarm and police systems applicable to every community and industry. We gladly co-operate in planning such protection.

THE GAMEWELL COMPANY

Specialists in Public Safety

NEWTON UPPER FALLS **MASSACHUSETTS**